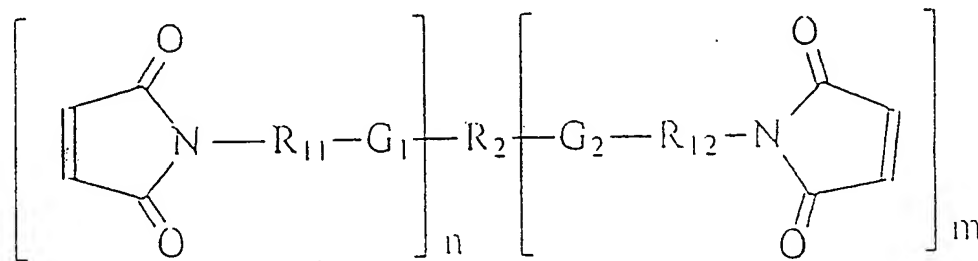


AMENDMENTS TO THE CLAIMS

1 (currently amended). A method for controlling the cure rate of a water compatible non emulsion, non dispersing actinic radiation curable aqueous composition containing a maleimide derivative [and] having the structure:



wherein n and m each independently represent an integer of 1 to 5, the sum of m and n is 6 or smaller;

R₁₁ and R₁₂ each independently represent a linking group selected from the group consisting of an alkylene group, an alicyclic group, an arylalkylene group, and a cycloalkylalkylene group;

G₁ and G₂ each represent an ester linkage selected from the group consisting of --COO-- and --OCO--;

and R₂ represents a linking chain having an average molecular weight of 100 to 100,000 selected from the group consisting of a (poly)ether or (poly)ester linking chain, in which at least one organic group consists of a group or groups selected from a straight or branched chain alkylene group, an alkylene group having a hydroxyl group, an alicyclic group, an aryl group, an arylalkylene group, and a cycloalkylalkylene group connected via at least one linkage selected from the group consisting of an ether or ester linkage;

wherein said method comprises adjusting the molecular weight of R₂, in the absence of a photoinitiator, to control the cure rate of the composition.

2 (original). The method of claim 1 wherein when the molecular weight of R₂ is increased so as to increase the cure rate of said water compatible actinic radiation curable composition containing a maleimide derivative.

3 (original). The method of claim 1 wherein when the molecular weight of R₂ is decreased so as to decrease the cure rate of said water compatible actinic radiation curable composition containing a maleimide derivatives.

4 (original). The method of claim 1 wherein R₂ linking chain has an average molecular weight of 100 to 100,000.

5 (original). The method of claim 1 wherein R₂ is selected from the group consisting of (poly)ether linking chains, (poly)ester linking chains and mixtures thereof, in which at least one organic group consists of a group or groups selected from a straight or branched chain alkylene group, an alkylene group having a hydroxyl group, an alicyclic group, an aryl group, an arylalkylene group, and a cycloalkylalkylene group connected via at least one linkage selected from the group consisting of an ether and ester linkage.

6 (currently amended). The method of claim 5 wherein R₂ incorporates repeating units containing at least one group selected from a C₂-C₂₄ straight or branched chain alkylene group, and a C₂-C₂₄ alkylene group having a hydroxyl group.

7 (original). The method of claim 6 wherein R₂ is a (poly)ester linking chain having an average molecular weight of 100 to 100,000 and incorporates repeating units containing at least one group selected from a C₂-C₂₄ straight or branched chain alkylene group, a C₂-C₂₄ alkylene group having a hydroxyl group and a C₆-C₂₄ aryl group.

8 (original). The method of claim 6 wherein R₂ is a (poly)ether linking chain having an average molecular weight of 100 to 100,000 and incorporates repeating units containing at least one group selected from a C₂-C₂₄ straight or branched chain alkylene group, a C₂-C₂₄ alkylene group having a hydroxyl group and a C₆-C₂₄ aryl group.

9. The method of claim 8 wherein R₂ is polytetramethylene glycol or polyethylene glycol.

10 (original). The method of claim 9 wherein R₂ is a polytetramethylene glycol having an average molecular weight of 100 to 4000.

11 (original). The method of claim 10 wherein R₂ is a polyethylene glycol having an average molecular weight of 100 to 1000.